

Factors associated with persistent atrial fibrillation after achievement of euthyroid state

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INTRODUCTION

Atrial fibrillation (AF) occurs in up to 15% of patients with hyperthyroidism. Although hyperthyroidism is usually regarded as a reversible cause of AF, spontaneous sinus conversion occurs in only 2/3 of patients upon the normalization of T4 levels.

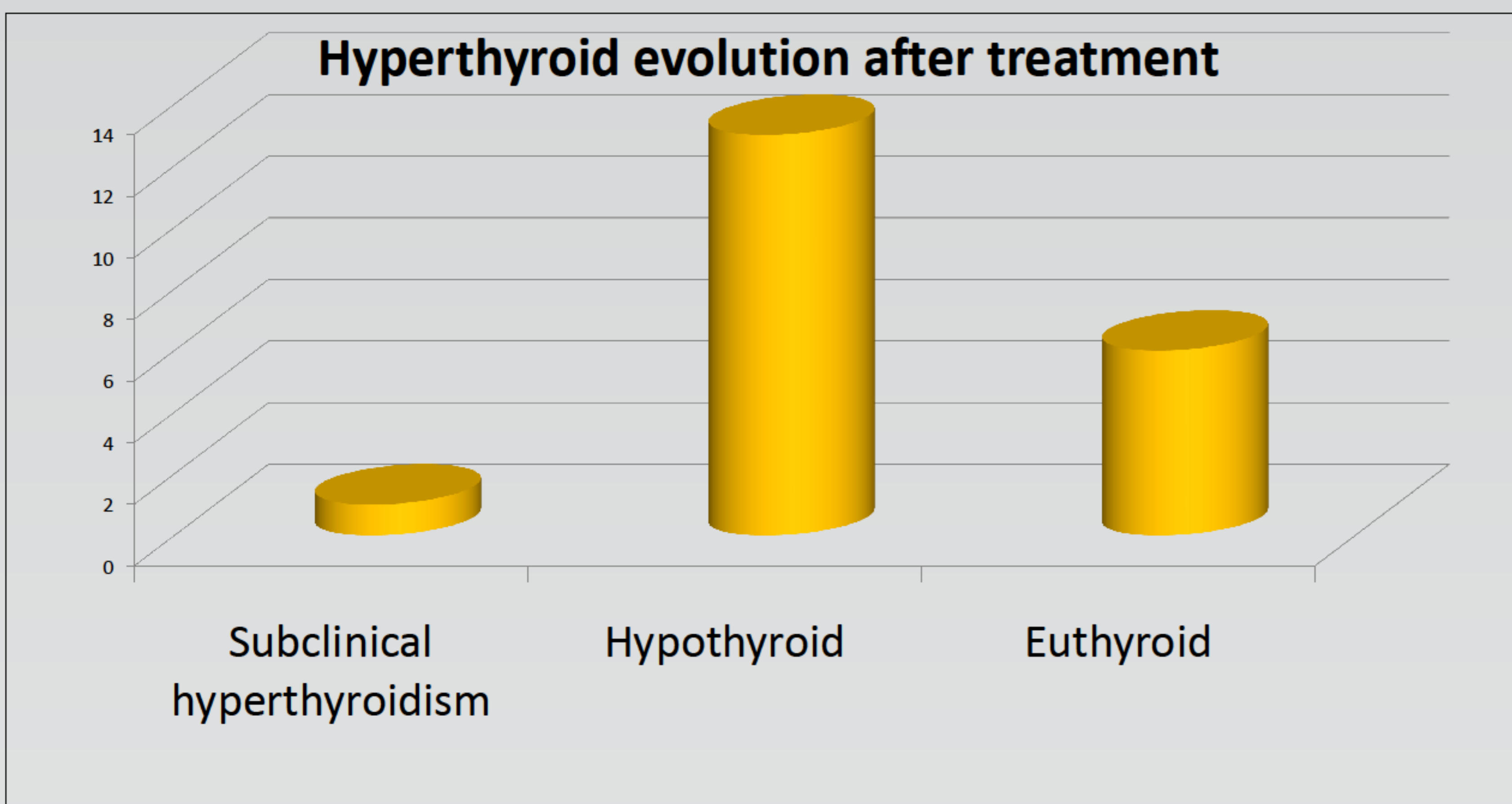
The aim of this study was to identify factors associated with persistent atrial fibrillation after restoration of euthyroid state.

METHODS

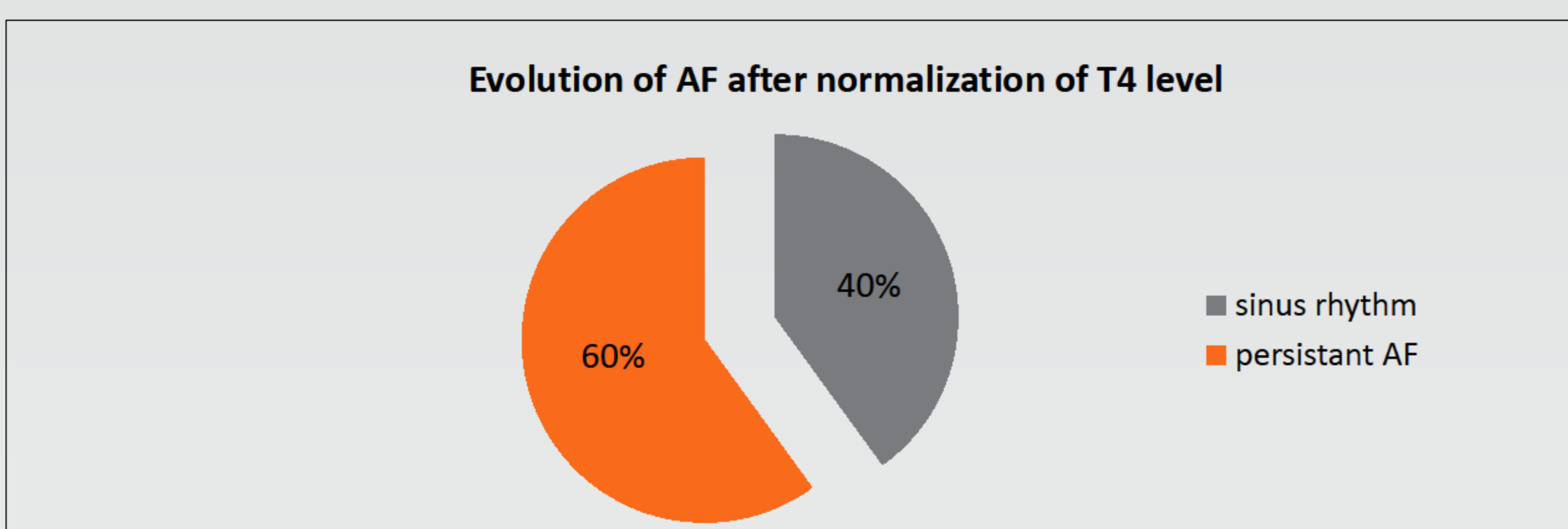
- Retrospective study of 13 years.
- Twenty patients hospitalized for hyperthyroidism with AF and who had normalized their FT4 level during follow-up were enrolled.
- Non parametric Mann Whitney test was used to compare medians.

RESULTS

- The median follow-up period was 58 months.
- At the end of the follow-up period, 6 patients were euthyroid, 13 hypothyroid and 1 patient had a subclinical hyperthyroidism.



- Eight of the 20 patients returned to sinus rhythm after a median of 15 months.



- We found no significant difference between subjects who returned to sinus rhythm and those with persistent AF in terms of:

	Patients who returned to sinus rhythm	Patients with persistent AF	p
Age (years)	55,3±18,6	55,9±12,3	1
Gender (% men)	58,3%	41,7%	0,65
History of hypertension	25%	25%	1
History of diabetes	12,5%	16,7%	1
Abnormal echocardiography	33,3%	10%	0,51
Ejection fraction value	55,1±13,2%	59±5%	0,71
Toxic nodular etiology of hyperthyroidism	16,7%	83,3%	0,33
Initial of FT4 level (ng/dl)	3,5±0,8	5,1±5,1	0,77
Period between the diagnosis of hyperthyroidism and the nomalization of FT4 level (months)	29,1±48,2	31,9±27,6	0,17

DISCUSSION AND CONCLUSION

- Successful treatment of hyperthyroidism resulted in conversion from atrial fibrillation in up to one third of our patients.
- Nakazawa HK et al indicated that 62% of atrial fibrillation reverted to sinus rhythm within the first 3 to 4 months after the control of thyrotoxicosis, even without antiarrhythmic therapy.
- This study suggests that spontaneous reversion of atrial fibrillation to sinus rhythm is highly unlikely if the duration of atrial fibrillation before the achievement of euthyroid state exceeds 13 months
- In our study, no factors were associated with persistent atrial fibrillation.